REMARKS

Claims 38 and 40-73 are pending; claims 38, 40-56 and 66-77 are rejected; and claims 57-65 and 73 are allowed in this application. Claims 38, 42, 66, 68, 70 and 71 are amended; and the specification is amended hereby.

Responsive to the rejection of claims 52-56 under 35 U.S.C. § 112, first paragraph, Applicants have amended claim 42 to remove the recitation relative to the upstream side of the applicator unit. The recitation of the electrode arrangement having a floating potential is disclosed on page 16 starting at line 19 of the specification and indicates that an electrode arrangement 40 has a floating potential that receives a charge and imparts a charge to the substrate. Further, Applicants have amended the specification to more exactly recite the disclosure of claim 54, which is a part of the original submission.

Responsive to the rejection of claims 42-56 under 35 U.S.C. § 112, second paragraph, Applicants have amended claim 42 to remove the words that position the floating potential electrode upstream from the device.

Responsive to the Examiner's indication that the proposed substitute sheet of drawing filed on December 12, 2005 has been disapproved as introducing new material, the Applicants respectfully traverse the position of the Examiner and point to the recitation contained in claim 54 of the Application as originally submitted. Claim 54 indicates the presence of a magnetic field device positioned to impart a magnetic field to the application medium, thereby influencing movement of the application medium. This information does not include the positioning of magnetic field device at any location and it was added in the amended drawing because it was consistent with the element contained in the claim. Further, at page 2 of the previous Office Action it was stated that the magnetic field device must be shown on the drawing, to which Applicants complied by adding, in a schematic fashion, a box 60. For the foregoing reasons,

Applicants submit that the drawings are in allowable form and should be entered and the disapproval of the drawings be withdrawn.

Responsive to the rejection of claims 38, 40-42, 45-47 and 49 under 35 U.S.C. § 102(b) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,290,600 (Ord et al.), Applicants have amended claim 38 and 42 and submit that claims 38, 40-42, 45-47 and 49 are now in condition for allowance.

Ord et al. disclose an apparatus and process for producing sheets of material (Figs. 1-5) in which a liquid is supplied to passage 14 and passes through distribution gallery 12 to slot 10. In slot 10 the liquid is contacted by a conducting or semi-conducting surface 16, which is connected to the output of a high voltage generator. Surface 16 is connected to the negative terminal of the high voltage generator, the other terminal being connected to earth. Positive ions are conducted away from the liquid by surface 16 leaving a negative charge on the liquid. An intense electrical field is formed at edge 24 when this is covered with liquid (column 4, lines 38-55). Edge 24 terminates in a large radius of curvature at opposite ends. This is to prevent corona discharge, which may be produced by high electrical stress, which would result from the edge terminating in sharp corners (column 6, lines 6-10).

In contrast claim 38, as amended recites in part:

> a suction box; and
>
> a trailing scraper, said electrode arrangement being <u>positioned between said suction box and said trailing scraper</u>.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Ord et al. or any of the other cited references, alone or in combination, and has distinct advantages thereover.

Ord et al. disclose an apparatus and process for producing sheets of material in which the surface in contact with a liquid is connected to a negative terminal of a high voltage generator

thereby leaving a negative charge on the liquid. Applicants' invention imparts an electric charge to the liquid as it moves from the applicator to the substrate, further the electrode arrangement is positioned between a suction box and a trailing scraper. Ord et al. does not teach the altering of the electrical potential of an application medium curtain as it travels from an applicator to the substrate, nor the positioning of the electrode arrangement. Therefore, Ord et al. and any of the other cited references, alone or in combination fail to disclose, teach or suggest a suction box and a trailing scraper with an electrode arrangement positioned between the suction box and the trailing scraper as recited in claim 38.

An advantage of Applicants' invention is that it improved the adhesion of the application medium to the web and particularly provides for improved adhesion to the edge of the web. For the foregoing reasons, Applicants submit that claim 38 and claims 40 and 41 depending therefrom are now in condition for allowance, which is hereby respectfully requested.

In further contrast claim 42, as amended, recites in part:

> a suction box; and
>
> a trailing scraper, said electrode arrangement being positioned between said suction box and said trailing scraper.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Ord et al. or any of the other cited references, alone or in combination, and has distinct advantages thereover.

Ord et al. disclose an apparatus and process for producing sheets of material in which the surface in contact with a liquid is connected to a negative terminal of a high voltage generator thereby leaving a negative charge on the liquid. Applicants' invention imparts an electric charge to the liquid as it moves from the applicator to the substrate, further the electrode arrangement is positioned between a suction box and a trailing scraper. Ord et al. does not teach the altering of the electrical potential of an application medium curtain as it travels from an applicator to the

substrate, nor the positioning of the electrode arrangement. Therefore, Ord et al. and any of the other cited references, alone or in combination fail to disclose, teach or suggest a suction box and a trailing scraper with an electrode arrangement positioned between the suction box and the trailing scraper as recited in claim 42.

An advantage of Applicants' invention is that it improved the adhesion of the application medium to the web and particularly provides for improved adhesion to the edge of the web. For the foregoing reasons, Applicants submit that claim 42 and claims 45-47 and 49 depending therefrom are now in condition for allowance, which is hereby respectfully requested.

Claim 48 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ord et al. However claim 48 depends from claim 42, which is now in condition for allowance for the reasons given above. Accordingly, Applicants submit that claim 48 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claim 42 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,470,274 (Sandiford et al.), Applicants have amended claim 42 and submit that claim 42 is now in condition for allowance.

Sandiford et al. disclose a thermal plastic film production method and apparatus (Fig. 1) in which a polypropylene film 1 is extruded from die 2. Polypropylene film 1 is chilled on quenching drum 3. Quenching drum 3 is connected to earth as shown at 4. Wire 5, which is connected to a source of high potential, forms an electrode 5. Hot air blower 6, which is made up of a centrifugal fan and an electrical heating element directs a stream of air at an elevated temperature of from 200 to 250°C between the electrode and the quenching film (column 3, lines 23-32).

In contrast claim 42, as amended, recites in part:

a suction box; and

a trailing scraper, said electrode arrangement being positioned between said suction box and said trailing scraper.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Sandiford et al. or any of the other cited references alone or in combination, and has distinct advantages thereover.

Sandiford et al. disclose a thermal plastic film production method and apparatus having a centrifugal fan and an electrical heating element directing a stream of air at an elevated temperature from 200 to 250°C between the electrode and the quenching film. There is no suction box or trailing scraper mentioned or disclosed at all in Sandiford et al. In contrast Applicants' invention positions an electrode arrangement between trailing scraper and a suction box. Therefore Sandiford et al. and any of the other cited references alone or in combination, fail to disclose, teach or suggest a suction box and a trailing scraper with an electrode arrangement positioned between the suction box and the trailing scraper as recited in claim 42.

An advantage of Applicants' invention is that it improved the adhesion of the application medium to the web and particularly provides for improved adhesion to the edge of the web. For the foregoing reasons, Applicants submit that claim 42 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 42, 43, 50 and 53 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,489,672 (Kisler et al. '672), Applicants have amended claim 42 and submit that claims 42, 43, 50 and 53 are now in condition for allowance.

Kisler et al. '672 disclose a coating uniformity improvement apparatus (Figs. 1-4) including a backing roller 12 that is cylindrically shaped and electrically conductive. Backing roller 12 is mounted for rotation about backing roller axis 14. A high voltage power supply 20, having a DC voltage across its output terminals, is connected between backing roller 12 and applicator 16 through paths 22 and 24. When power supply 20 is energized through path 25, an

electrostatic field 26 is produced in coating gap 18 between high potential backing roller 12 and grounded applicator 16. As a charge-retaining web 28 is moved in direction 30 through gap 18, web 28 is electrostatically charged by orienting its dipoles with said electrostatic field 26. Electrostatic charges produced on web 28 by electrostatic field 26 cause fluid 32, flowing from applicator 16 into coating gap 18, to be attracted toward and uniformly deposited on moving web 28 (column 2, line 52 through column 3, line 12).

In contrast claim 42, as amended, recites in part:

> a suction box; and
>
> a trailing scraper, said electrode arrangement being positioned between said suction box and said trailing scraper.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Kisler et al. '672 or any of the other cited references, alone or in combination and has distinct advantages thereover.

Kisler et al. '672 disclose a coating uniformity improvement apparatus that provides for electrostatic charges produced on web 28 by an electrostatic field to cause the fluid flowing from the applicator into a coating gap to be attracted toward and uniformly deposited on a moving web. In contrast, Applicants' invention alters and electrical potential of the application medium after it leaves the applicator as it moves to the substrate. Kisler et al. '672 does not teach the altering of the electrical potential of an application medium curtain as it travels from an applicator to a substrate. Further, Kisler et al. '672 does not disclose the positioning of a trailing scraper and a suction box on each side of an electrode arrangement. Therefore Kisler et al. '672 or any of the other cited references, alone or in combination, fail to disclose, teach or suggest a suction box and a trailing scraper with an electrode arrangement positioned between the suction box and the trailing scraper as recited in claim 42.

An advantage of Applicants' invention is that it improved the adhesion of the application medium to the web and particularly provides for improved adhesion to the edge of the web. For the foregoing reasons, Applicants submit that claim 42 and claims 43, 50 and 53 depending therefrom are now in condition for allowance, which is hereby respectfully requested.

Claims 50 and 51 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kisler et al. '672 in view of German Patent DE 197 33 333. However, claims 50 and 51 depend from claim 42, which is in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 50 and 51 are in condition for allowance, which is hereby respectfully requested.

Claims 55 and 56 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kisler et al. '672 in view of U.S. Patent No. 3,206,323 (Miller). However, claims 55 and 56 depend from claim 42, which is in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 55 and 56 are in condition for allowance, which is hereby respectfully requested.

Claim 54 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kisler et al. '672 in view of U.S. Patent No. 3,681,138 (Ankendrand et al.). However, claim 54 depends from claim 42, which is in condition for allowance for the reasons given above. Accordingly, Applicants submit that claim 54 is in condition for allowance, which is hereby respectfully requested.

Claims 44 and 52 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kisler et al. '672 in view of U.S. Patent No. 4,402,035 (Kisler '035). However, claims 44 and 52 depend from claim 42, which is in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 44 and 52 are in condition for allowance, which is hereby respectfully requested.

Claim 48 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ord et al. However, claim 48 depends from claim 42, which is now in condition for allowance for the reasons given above. Accordingly, Applicants submit that claim 48 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 70 and 71 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,060,649 (Coleman), Applicants have amended claims 70 and 71 and submit that claims 70 and 71 are now in condition for allowance.

Coleman discloses a paint curtain machine and method of painting (Figs. 1-7) including guide plates 41 and 42. Paint falls from outer face 25 of weir bar 12 from the line of discharge 25a in regions directly above guide plates 41 and 42 bridge gaps 44 and 45 between weir bar 12 and plates 41 and 42, respectively. Left and right edges 48 and 49 of the curtain are drawn to and are guided along the sloped inner edges, respectively, of guide plates 41 and 42. The front surfaces of plates 41 and 42 are left dry in the regions between curtain 40 and wet regions 46 and 47 (column 5, lines 17-25).

In contrast claim 70 as amended, recites in part:

> at least one electrode strip positioned substantially parallel with at least one of said plurality of guiding elements.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Coleman or any of the other cited references, alone or in combination and has distinct advantages thereover.

Coleman discloses a paint curtain machine and method of painting including guide plates having sloped inner edges to which the curtain is drawn. In contrast Applicants' invention has an electrode strip that is positioned substantially parallel with at least one of the plurality of edge guiding elements. The electrode imparts an electric field to the curtain as it falls. Therefore, Coleman and any of the other cited references, alone or in combination fail to disclose, teach or

suggest at least one electrode strip positioned substantially parallel with one of the plurality of edge guiding elements, as recited in claim 70.

An advantage of Applicants' invention is that the electrode imparts an electric field to the moving application medium as it falls to the web. For the foregoing reasons, Applicants submit that claim 70 is now in condition for allowance, which is hereby respectfully requested.

In further contrast claim 71 as amended, recites in part:

> at least one electrode strip positioned substantially parallel with at least one of said plurality of guiding elements.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Coleman or any of the other cited references, alone or in combination and has distinct advantages thereover.

Coleman discloses a paint curtain machine and method of painting including guide plates having sloped inner edges to which the curtain is drawn. In contrast Applicants' invention has an electrode strip that is positioned substantially parallel with at least one of the plurality of edge guiding elements. The electrode imparts an electric field to the curtain as it falls. Therefore, Coleman and any of the other cited references, alone or in combination fail to disclose, teach or suggest at least one electrode strip positioned substantially parallel with one of the plurality of edge guiding elements, as recited in claim 71.

An advantage of Applicants' invention is that the electrode imparts an electric field to the moving application medium as it falls to the web. For the foregoing reasons, Applicants submit that claim 71 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claim 68 under 35 U.S.C. § 103(a) as being unpatentable over Coleman, Applicants have amended claim 68 and submit that claim 68 is now in condition for allowance.

Coleman is discussed above.

In contrast claim 68, as amended recites in part:

> at least one electrode strip positioned substantially parallel with at least one of said plurality of guiding elements.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Coleman or any of the other cited references, alone or in combination and has distinct advantages thereover.

Coleman discloses a paint curtain machine and method of painting including guide plates having sloped inner edges to which the curtain is drawn. In contrast Applicants' invention has an electrode strip that is positioned substantially parallel with at least one of the plurality of edge guiding elements. The electrode imparts an electric field to the curtain as it falls. Therefore, Coleman and any of the other cited references, alone or in combination fail to disclose, teach or suggest at least one electrode strip positioned substantially parallel with one of the plurality of edge guiding elements, as recited in claim 68.

An advantage of Applicants' invention is that the electrode imparts an electric field to the moving application medium as it falls to the web. For the foregoing reasons, Applicants submit that claim 68 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claim 68 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,117,236 (Ruscak et al.) in view of U.S. Patent No. 5,837,324 (Yapel et al.), Applicants have amended claim 68 and submit that claim 68 is now in condition for allowance.

Ruscak et al. disclose a curtain coating apparatus and method with continuous width adjustment (Figs. 1-6) including a weir 1 with liquid supply device 18. Weir 1 has a horizontal lip device 2 where the layer detaches to form a free-falling curtain 3. A curtain interception device, such as a trough 4, is positioned below the lip to intercept and collect a portion of curtain

3 that is not to be coated 19. Trough 4 has an outlet 5 from which the collected coating composition exits (column 4, lines 48-58).

Yapel et al. disclose a profiled edge guide (Fig. 1) of a slide coating apparatus 2. Slide coating apparatus 2 includes a coater face 4 having one or more feed slots 6 of slot width W. Coating apparatus 2 further includes edge guides 12 located along the length of coating apparatus 2. Coating fluid 8 flows from feed slot 6 and flows on film face 4 (column 3, lines 28-34).

In contrast claim 68, as amended recites in part:

> at least one electrode strip positioned substantially parallel with at least one of said plurality of guiding elements.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Ruscak et al., Yapel et al. or any of the other cited references, alone or in combination and has distinct advantages thereover.

Ruscak et al. disclose a curtain coating apparatus and method with continuous width adjustment having a curtain interception device, such as trough positioned below a lip to intercept and collect a portion of a curtain that is not to be coated. Yapel et al. disclose a profiled edge guide having a coating fluid that flows through a feed slot and flows on a film face. In contrast Applicants' invention has an electrode strip that is positioned substantially parallel with at least one of the plurality of edge guiding elements. The electrode imparts an electric field to the curtain as it falls. Therefore, Ruscak et al., Yapel et al. and any of the other cited references, alone or in combination fail to disclose, teach or suggest at least one electrode strip positioned substantially parallel with one of the plurality of edge guiding elements, as recited in claim 68.

An advantage of Applicants' invention is that the electrode imparts an electric field to the moving application medium as it falls to the web. For the foregoing reasons, Applicants submit that claim 68 is now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claim 66 under 35 U.S.C. § 103(a) as being unpatentable over Ord et al. in view of Coleman, Applicants have amended claim 66 and submit that claim 66 is now in condition for allowance.

Ord et al. and Coleman are discussed above.

In contrast, claim 66 as amended, recites in part:

> an electrode arrangement ... including at least one electrode strip positioned substantially parallel with at least one of said plurality of edge guiding elements.

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Ord et al., Coleman or any of the other cited references, alone or in combination and has distinct advantages thereover.

Ord et al. disclose an apparatus and process for producing sheets of material in which the surface in contact with a liquid is connected to a negative terminal of a high voltage generator thereby leaving a negative charge on the liquid. Coleman discloses a paint curtain machine and method of painting including guide plates having sloped inner edges to which the curtain is drawn. In contrast Applicants' invention has an electrode strip that is positioned substantially parallel with at least one of the plurality of edge guiding elements. The electrode imparts an electric field to the curtain as it falls. Therefore, Ord et al., Coleman and any of the other cited references, alone or in combination fail to disclose, teach or suggest an electrode arrangement ... including at least one electrode strip positioned substantially parallel with at least one of the plurality of edge guiding elements, as recited in claim 66.

An advantage of Applicants' invention is that the electrode imparts an electric field to the moving application medium as it falls to the web. For the foregoing reasons, Applicants submit that claim 66 is now in condition for allowance, which is hereby respectfully requested.

Claims 67, 69 and 72 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ord et al., in view of Coleman and Ruscak et al. However, claims 67, 69 and 72 depend

from claim 66, which is now in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 67, 69 and 72 are now in condition for allowance, which is hereby respectfully requested.

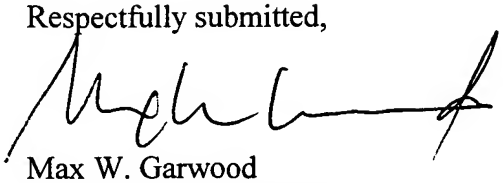
Applicants thank the Examiner for the indication that claims 57-65 and 73 are allowed.

For the foregoing reasons, Applicants submit that the pending claims are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorize that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,



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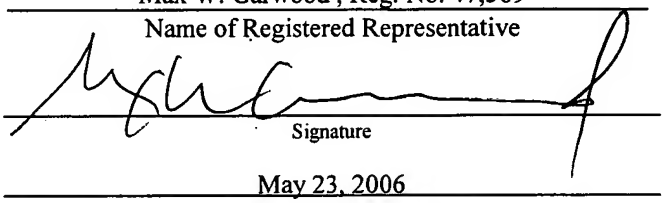

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